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Conservation
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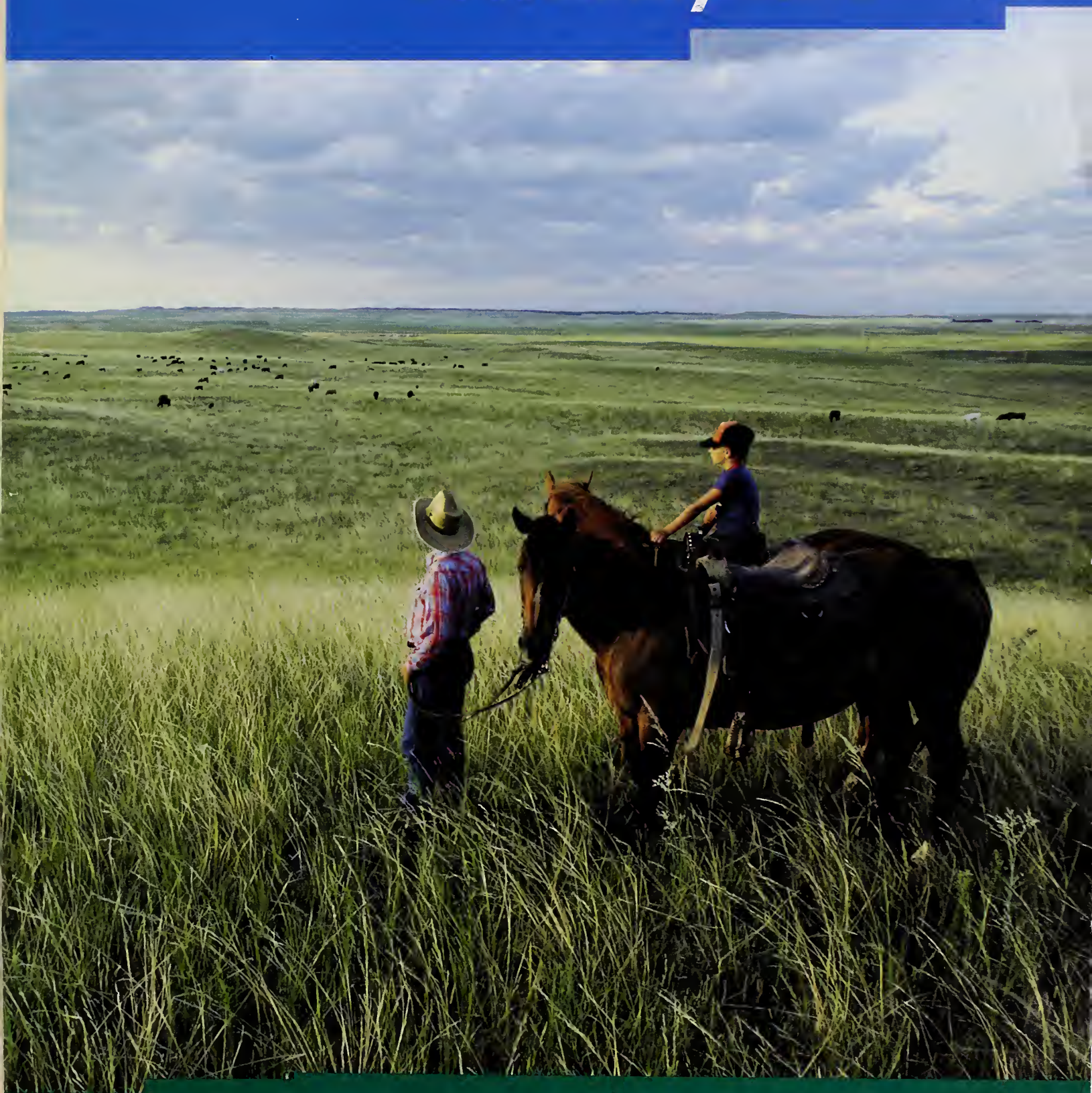
In Partnership With People and A Healthy Land



PA-1540

United States Department of Agriculture

Foreword

The Natural Resources Conservation Service, formerly known as the Soil Conservation Service (SCS), was born in the Dust Bowl days of the 1930s. In the midst of our nation's worst ecological disaster, Hugh Hammond Bennett, a soil scientist who grew up on a wornout cotton farm in North Carolina, convinced this nation that conservation could only be successful when private landowners became part of the effort. National parks and forests were essential to a healthy land, but nature knew no boundaries, and the care of it could not be locked into national sanctuaries or behind garden walls.

Conservationist Aldo Leopold described the conservation picture well in 1939 when he wrote that "it is the American farmer who must weave the greater part of the rug on which America stands."

When Hugh Bennett hired the first SCS employees in 1935, he recognized the importance of a multi-resource approach to conservation on private lands. Our first employees came with the same skills that they have today. They were engineers, biologists, sociologists, economists, agronomists, wildlife managers, rangeland ecologists, office managers, secretaries, and foresters, as well as soil scientists and conservation technicians.

We took on our new name in 1994 in recognition of the fact that we've always been a natural resources conservation service. The name change in no way diminishes our commitment to conserving and enhancing our nation's soils. Soil is a fundamental resource upon which all life depends and the Natural Resources Conservation Service will continue to build on its proud tradition of assisting land users in protecting and enhancing the quality of our soil resources.

For six decades we've worked side-by-side with landowners, conservation districts, state and local governments, and urban and rural partners to restore and enhance the American landscape.

This booklet introduces you to who we are today. We provide help to landowners, but it is ultimately they who paint the conservation picture on the landscape. Thus, we are often in the background. We've had no visitor centers in the traditional sense to promote ourselves and our partners.

In a very real way we do have a visitors center, however. It's a very large one—the American landscape. We hope this publication will encourage you to take a fresh look at it. Although there's much work yet to be done, there's also a good story being told on the land. The land is healthier today than when we began this effort, thanks to private landowners and our partnership with them.

We invite you to get to know us better. Wherever you are, we and our conservation partners are not far away. We are here to assist you. Together, we can produce a healthy land for ourselves, our children, and all other life that shares the earth with us.

Photo: Tim McCabe

Paul W. Johnson

Paul W. Johnson, Chief

In Partnership With People and a Healthy Land

Photo: Tim McCabe

Ron Nichols

COVER: Agriculture covers much of the nation's land, about 70 percent of which is privately owned. Protecting this natural resource base is the job of the nation's farmers and ranchers, who receive onsite assistance from the Natural Resources Conservation Service.

Photo: Tim McCabe

The Natural Resources Conservation Service

The Natural Resources Conservation Service (NRCS) is the federal agency that works with private landowners to help them protect their natural resources.

NRCS conservationists spend most of their time on agricultural land–cropland, pasture, and rangeland–the predominant use of private lands in this country. They work in close cooperation with conservation districts through field offices that serve nearly every county in the nation.

The agency emphasizes voluntary, science-based assistance, partnerships, and cooperative problem solving at the community level.

NRCS has six service regions comprised of states with similar ecological, economic, and social factors. These regions concentrate NRCS resources toward work done in the field and bring more focus of effort through strategic planning.

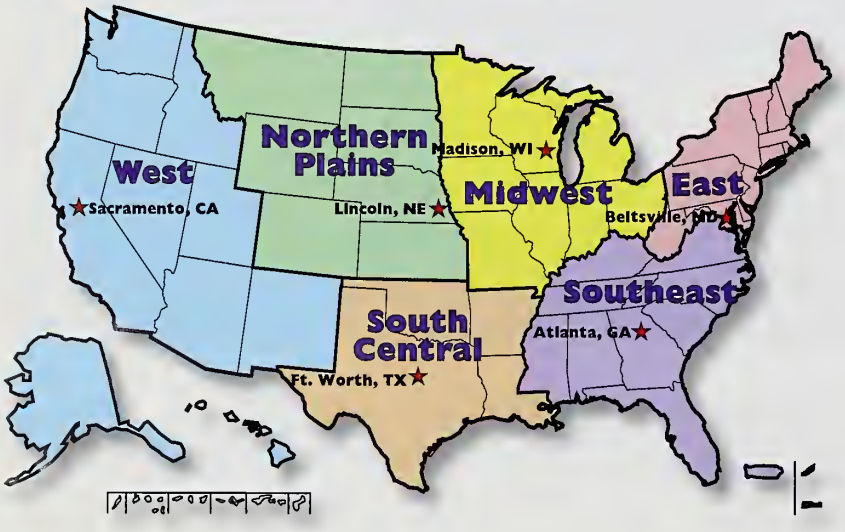
To ensure its continued technical excellence, NRCS has established the National Science and Technology Consortium. The consortium will provide national policy leadership for agency technical responsibilities. It will coordinate technical activities among all agency levels. It will also ensure acquisition and development of technology in special emphasis areas that are relevant to current and future agency priorities and responsive to needs of field offices and our clients.

The consortium consists of:

- Six institutes to advance science-based assistance to grazing lands, natural resources inventory and analysis, social sciences, soil quality, wetlands science, and watershed science;
- Five national centers to carry out work in soil survey, cartography and geospatial, water and climate, plant data, and soil mechanics;
- Five divisions for biological conservation sciences, conservation engineering, natural resources inventory, resources economics and social sciences, and soils; and
- Cooperating scientists for soil erosion and sedimentation, air quality, and agroforestry.

An important part of the consortium is a growing network of partnerships with nonprofit organizations, colleges and universities, other federal agencies, and other organizations.

Six service regions concentrate NRCS resources toward work done in the field and bring more focus of effort through strategic planning.



The Natural Resources Conservation Service has streamlined to put more of its people working directly with land users.

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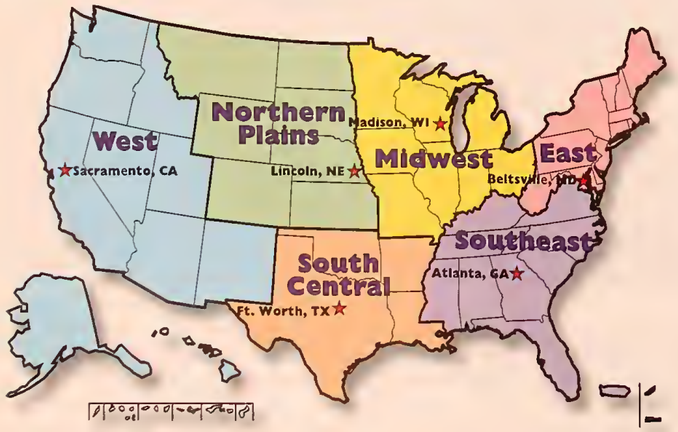

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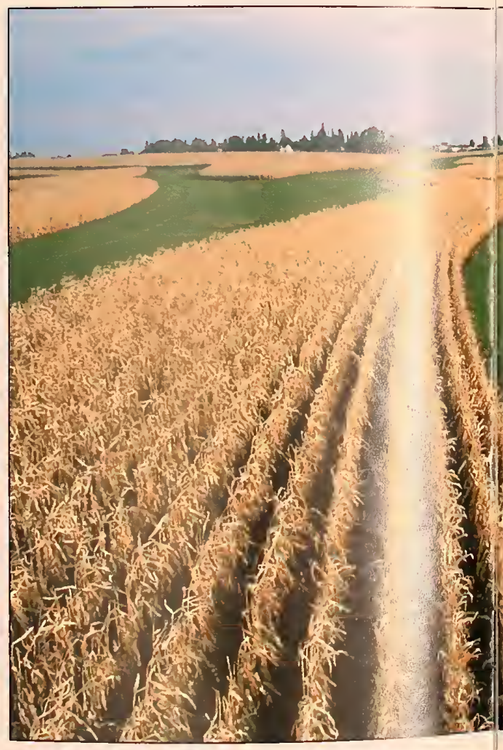
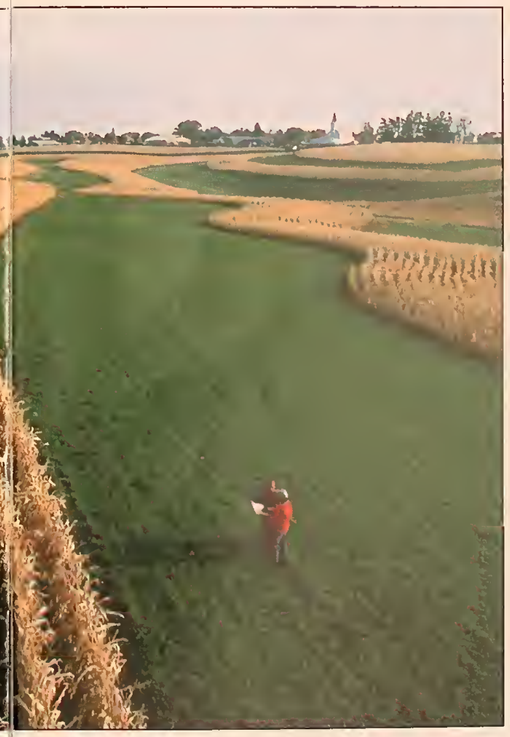
Ron Nichols

Natural resource challenges include improving rangeland conditions.

The focus of the Natural Resources Conservation Service is to help people live on the land in a sustainable way.



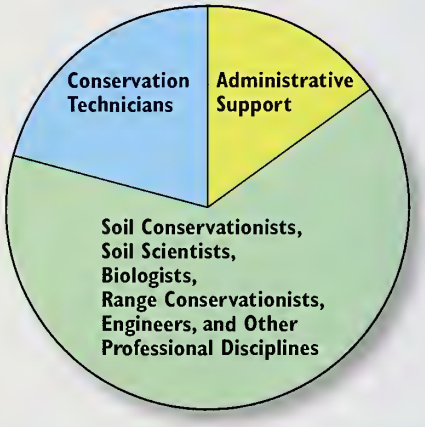


Tim McCabe

Don C. Schuhart

Our People

The NRCS Workforce



Tim McCabe

The strength of the Natural Resources Conservation Service is its workforce–some 12,200 as of 1995. Most NRCS employees serve in USDA's network of local, county-based offices, including those in the Caribbean Basin and the Pacific Basin. The rest are at state, regional, and national offices, providing technology, policy, and administrative support.

NRCS's dedicated employees are–

- Highly skilled in many scientific and technical specialties, including soil science, soil conservation, agronomy, biology, agroecology, range conservation, forestry, engineering, geology, hydrology, wetland science, cultural resources, and economics, to name a few.

- Committed to diversity–gender, race, physical ability, culture, ethnicity, and the mix of new ideas that flow from such richness.

The strength of the Natural Resources Conservation Service is its diverse and technically skilled workforce.

Our Clients

We serve all people who live and work on the land. The majority of our technical assistance goes to helping farmers and ranchers develop conservation systems uniquely suited to their land and individual ways of doing business.

Rural and urban communities seek our help in curbing erosion, conserving and protecting water, and solving other resource problems. We help local Resource Conservation and Development (RC&D) councils identify and solve human, economic, and environmental problems. Local, state, and federal agencies, policymakers, and special-use districts also rely on NRCS expertise.

American Indian tribes, Alaska Natives, Pacific Islanders, and other native groups work with NRCS on a variety of initiatives that include resource inventories and the adaptation of our conservation programs to fit the special needs of their people and their land. And countries around the globe seek NRCS advice in building their own conservation delivery systems and in coping with severe natural resource problems.

Tim McCabe

Ken Nichols

We also serve the generations who will inherit the land.

Our Partners

Conservation is the work of many—no one can do it alone. The Natural Resources Conservation Service relies on many partners to help set conservation goals, work with people on the land, and provide services. Our partners include conservation districts, local communities, state and federal agencies, NRCS Earth Team volunteers, AmeriCorps members, agricultural and environmental groups, and professional societies.

America's conservation districts—about 3,000 in all—are the heart of the conservation delivery system. These units of local government, organized by citizens under state law, operate on the premise that local people know the most about local needs. NRCS and districts are bound together by mutual conservation objectives as well as by legislation and formal agreements with the Secretary of Agriculture.

Districts do more than link NRCS with their neighbors and with local priorities for soil and water conservation. They support conservation work with district programs—often funded by county and state conservation agency partners—and with their own technical and support staff.

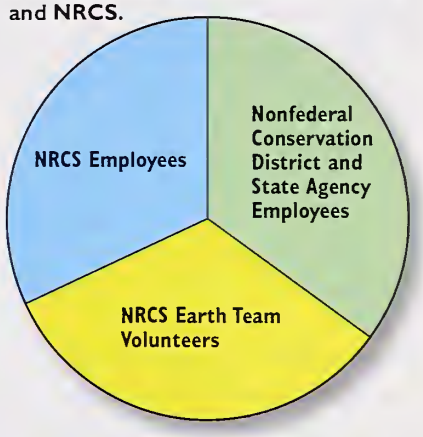
Earth Team volunteers work in agency offices, on the land, and in conservation education programs in schools and communities across the nation. In 1995, some 13,200 volunteers contributed almost a half-million hours of service. The Earth Team is an opportunity for Americans to share their ethic of good land stewardship.

AmeriCorps, the President's initiative to engage Americans of all ages and backgrounds in community-based service, is helping NRCS reach out to communities in ways we otherwise could not do. AmeriCorps teams address a wide variety of rural development and environmental protection projects, such as stream restoration, wetlands, and wildlife habitat. AmeriCorps benefits coastal erosion control and flood control efforts, recreation programs, urban conservation, and economic development. It also exposes youth to new skills and new careers.

NRCS partners with other USDA agencies to share resource inventories and to coordinate research and programs, develop conservation technology, and provide information and outreach. For example, NRCS and six other federal agencies have underway a pilot program called the "Urban Resources Partnership" to coordinate their assistance in improving natural resource conditions in selected urban areas. NRCS also works closely with other federal agencies, such as the Environmental Protection Agency, U.S. Army Corps of Engineers, and the U.S. Department of the Interior, on resource conservation issues.

We have also teamed up with private-sector partners to meet mutual goals. These partners include other conservation, environmental, and agricultural groups as well as agribusiness.

The local conservation delivery system is a partnership—conservation districts, state agencies, Earth Team volunteers, and NRCS.



Earth Team volunteers share their stewardship nationwide.

Ron Nichols

Tim McCabe

A Heritage Fit for Today

NRCS draws on a tradition of principles in working with private landowners that is as relevant today as when it was a dream to Hugh Hammond Bennett in the late 1920s and early 1930s.

A career soil scientist in USDA, Bennett became convinced that soil erosion was a national menace and that its solution lay in tailoring conservation practices to fit the capability of the land and the desires of landowners.

Simple solutions for all situations would be fruitless. The crops, the land, and the climate were so diverse that specialists in agronomy, forestry, soil science, biology, engineering, and social sciences contributed to conservation methods. They worked with farmers to find solutions that benefited the land and fulfilled the landowners' aspirations.

In 1933, the Soil Erosion Service, predecessor to the Soil Conservation Service and NRCS, began working with farmers in the Coon Creek watershed of southwestern Wisconsin to transform the square, eroding fields into what one sees today–a conservation showplace of contouring, stripcropping, terracing, and wise land use that benefits the soil, air, water, as well as the plant, animal, and human life of the whole watershed.

The carpeting of the land with soil conservation works nationwide was hastened with the passage of the Soil Conservation Act in April of 1935. Recognition of the first conservation district, bounded by the Brown Creek watershed in North Carolina, on August 4, 1937, established a method for the Service to assist farmers in the conservation districts. Locally elected citizens established priorities and plans for the district's work.

The following principles are NRCS's heritage and still guide its work:

- Assess the resources on the land, the conservation problems and opportunities.
- Draw on various sciences and disciplines and integrate all their contributions into a plan for the whole property.
- Work closely with land users so that the plans for conservation mesh with their objectives.
- Through implementing conservation on individual properties, contribute to the overall quality of the life in the watershed or region.

Hugh Hammond Bennett, the father of soil conservation, saw soil erosion as a national menace.

Terrace construction was done with mules and a fresno in the early years of soil conservation.

A Heritage Fit for Today

"National conservation action must spring from people on the land, and to large extent, be advanced by them as individuals, with the help of government." —Hugh Hammond Bennett

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The first watershed selected to demonstrate the values of soil conservation measures, Coon Creek in Wisconsin has become a showplace of conservation. In 1933 the Soil Erosion Service, predecessor to SCS and NRCS, began working with farmers to transform the square eroding fields into what one sees today.

Hugh Hammond Bennett, the father of soil conservation, saw soil erosion as a national menace.

Terrace construction was done with mules and a fresno in the early years of soil conservation.

One popular way to spread the word about conservation has been demonstrations, such as this improved pasture in Louisiana in the late 1930s.

Protecting the Nation's Resources

Continuous change–in weather, in landowner objectives, in what happens elsewhere on the landscape–makes protecting the nation's natural resources a challenge. Because of the interconnectedness of natural systems, the Natural Resources Conservation Service uses a comprehensive, multi-resource approach. While much work remains to be done, here are some examples of what is happening around the country to protect the nation's natural resources.

A Decade of Erosion Reduction

Farmers and ranchers have dramatically reduced soil erosion by one-third on cropland over the last decade.

The benefits are seen in cleaner water, improved wildlife habitat, and land protected from the damages caused by wind and water erosion.

These benefits are the result of increased stewardship by farmers and ranchers and their response to the conservation provisions in the 1985 and 1990 farm bills.

One provision, conservation compliance, asks farmers to protect the nation's highly erodible cropland in exchange for access to USDA farm program benefits. Over the past decade, NRCS helped clients develop and implement conservation plans on 140 million acres of highly erodible cropland.

Under the Conservation Reserve Program, farmers and ranchers planted grass or trees on more than 36 million acres of highly erodible or environmentally sensitive cropland.

Water Quality: A Challenge Being Met

Farmers and ranchers work closely with USDA to protect water quality. As they improve nutrient and pesticide management and reduce soil erosion, they reduce pollutants that would otherwise end up in lakes and streams. Special USDA initiatives encourage water quality practices on farms and ranches and on a regional basis.

One of the most innovative water quality programs is underway in the New York City watershed. It has a threefold purpose: (1) providing quality drinking water for half the population of New York state, (2) eliminating the need to build a multi-billion-dollar water filtration plant, and (3) helping the agriculture community to protect the farm and forest soils of the watershed.

Instead of building a water filtration plant, New York City officials are supporting agriculture as the preferred land use in the watershed that provides the city its water. Protecting drinking water at its source costs only a fraction of the cost of building and maintaining a filtration plant. Through a comprehensive approach, farmers are receiving assistance to develop management practices that protect water quality, as well as farm business plans to sustain a profitable operation.

This program is a good example of collaboration among groups with diverse interests, including farmers, local soil and water conservation districts, the Cooperative Extension System/Soil and Water District County Project Team, NRCS, Cornell University, the New York State Soil and Water Conservation Committee, and the New York City Department of Environmental Protection.

Larry Rana

Much of the cropland in Puerto Rico is on steeply sloping land and requires special attention to erosion management.

An innovative water quality program helps provide clean drinking water for New York and eliminates the need for a new multi-billion-dollar filtration plant.

Water Supply Forecasts in the West

Conserving scarce water supplies is a priority for many in the West, where most of the available water comes from mountain snow. NRCS collects snow survey information for water supply forecasts. Major sectors of the economy–agriculture, industry, recreation, and government–base their plans on these forecasts.

Advances in Wetlands Conservation

Wetlands are valued for many reasons. They filter pollutants from water, reduce flood damage, and recharge aquifers. They also provide economic benefits to many people as a result of fishing, hunting, and recreational opportunities.

The four federal agencies with responsibilities concerning wetlands–NRCS, Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S. Army Corps of Engineers–are working together to coordinate their efforts toward fair, flexible, and effective approaches to help landowners protect wetlands.

In addition, NRCS is working at the local level to provide more flexibility for small wetlands in a common-sense approach to wetlands protection and to provide voluntary programs for wetlands restoration.

One important effort to conserve and restore wetlands is in Louisiana, which has more than 40 percent of all coastal wetlands in the United States–and more than 80 percent of the nation's coastal wetland losses. Our employees are helping landowners through a watershed management approach that uses many of NRCS's specialized skills to conserve wetlands while meeting the objectives of the landowners–which might include fisheries, wildlife management, wildlife habitat, or grazing use.

In addition, an NRCS plant materials center in Louisiana is conducting studies on plant species to use in wetland restoration.

Air-Related Problems...and Solutions

Recent conservation programs are credited with a dramatic reduction in the amount of dust in the air in the Southern High Plains, site of some of the worst dust storms in U.S. history.

Researchers at Texas Tech University reported that the improvement was due to increased soil conservation efforts in response to conservation provisions in the Food Security Act of 1985.

Community benefits included less wind erosion, improved soil productivity and water quality, less dust haze, and fewer respiratory problems.

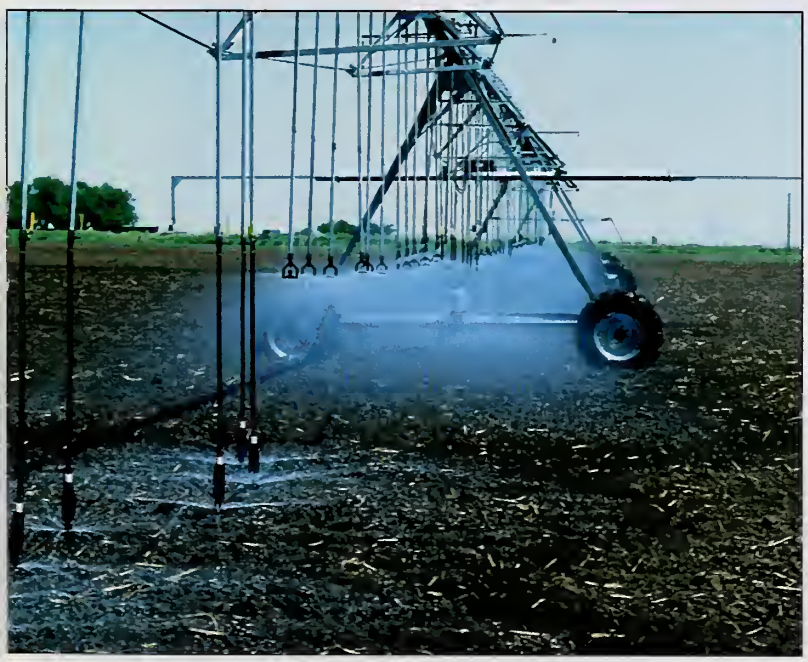
Another air-related problem is odor from livestock production. NRCS is working with livestock operators on animal waste systems to reduce odors.

Conservation Plants Meet Many Needs

Conservation plants are selected and developed for specific conservation tasks on farms, ranches, highway embankments, shorelines, streambanks, and reclaimed surface-mined land.

More than 200 conservation plants have been tested and released by NRCS and cooperating agencies. Currently, several thousand field trials are underway on farms, ranches, and other properties where 20,000 plants are being evaluated for conservation potential.

NRCS operates or provides technical assistance to 26 plant materials centers around the country.



T.A. Howell

Conserving water is an important issue on irrigated land in the West. On the Texas Southern High Plains, researchers developed LEPA—the Low Energy Precision Application irrigation concept—to conserve water and energy.

Tim McCabe

Demonstration projects on farms encourage water quality practices.

Grazing Lands: an Important Resource

With more than 640 million acres, private grazing lands are an important natural resource. Most of this land is range. About a fifth is pastureland. Grazing lands also represent some of the most extensive wildlife habitats in the country.

NRCS conservationists help farmers and ranchers improve pasture and range conditions by managing for forage improvement as well as weed and brush control, erosion control, and revegetation. They also help landowners enhance fish and wildlife habitat for economic, recreational, and aesthetic benefits and for the protection of endangered species.

In the Northeast, soil conservationists are helping dairies as they move toward intensively managed pasture systems that improve farm economics as well as water quality and wildlife habitat.

In the Southwest, ranchers are demonstrating the power of partnerships. Some 35 ranchers joined together as the Malpai Borderlands Group to take a more comprehensive approach to managing a million acres of rangeland in Arizona and New Mexico, along the Mexican border. They are working with NRCS, the Forest Service, other federal and state agencies, local conservation districts, environmental groups, and independent scientists.

Tim McCabe

Wetlands conservation is one of the nation's most important and sensitive natural resource issues.

Tim McCabe

Grass and trees protect millions of acres of highly erodible cropland enrolled in the Conservation Reserve Program.

Leading the Way in Conservation Technology

Good science and practical technology are at the heart of good land management and sound conservation policy. For NRCS, this includes:

- A national cooperative soil survey coordinated at state and local levels. This most fundamental of all resource data is essential to understanding how land use affects water and air and the health of animals, plants, and people. Soil surveys alert land users to the potential for soil erosion and agrichemical leaching and runoff, to the presence of prime farmlands and wetlands, and to the suitability of soils for specific agricultural, forestry, urban development, and engineering uses.

- Standards for conservation systems that address such areas as erosion control; animal waste management for poultry, livestock, and fish farming operations; irrigation water management; wetlands conservation and restoration; and flood control and streambank stabilization. These standards are adapted in NRCS field office technical guides to fit local conditions. These technical guides are the foundation for conservation planning for many land uses and for installation of conservation systems on the land.

- A plant materials program that introduces new ways to use plants for revegetation, land stabilization, and landscape enrichment.

- Computer "models" for predicting soil erosion by wind and water, agricultural nonpoint-source pollution of water, the effects of grazing practices on rangeland health, and the effects of management decisions on farm and ranch economics.

To meet the growing demand for our services, we are making our data bases available directly to our clients in their homes and businesses, on their own computers. We are also linking our unique soils data base with the resource data of other agencies to take full advantage of our geographic information system–GIS–technology.

GIS brings data to life graphically. By "layering" information from various data sources, the computerized GIS shows how all the pieces of our environment interact and helps landowners, resource managers, and policy makers analyze and visualize the effects of various land use decisions.

Tim McCabe

Tim McCabe

NRCS adapts the latest technology to meet the needs of the land and the people on the land.

Digitized soil survey maps are the foundation of computerized conservation planning technology.

Reading the Health of the Land

Every 5 years, the Natural Resources Conservation Service issues a report card on how well the nation is sustaining natural resources on nonfederal land.

Called the "National Resources Inventory," or NRI, this report card contains the most comprehensive and statistically reliable data of its kind in the world. It measures trends in soil erosion by water and wind, wetland losses, prime farmland acreage, irrigation, and conservation treatment needs at national and state levels.

In 1994, NRCS released the NRI data comparing resource conditions and trends in 1982 and 1992. Key findings include:

- Between 1982 and 1992, the nation's cropland acreage declined by about 9 percent (from 421 million to 382 million acres), most of it going into the Conservation Reserve Program; rangeland acreage declined by about 2 percent (from 409 million to 399 million acres); and developed land increased 18 percent (from 78 million to 92 million acres).

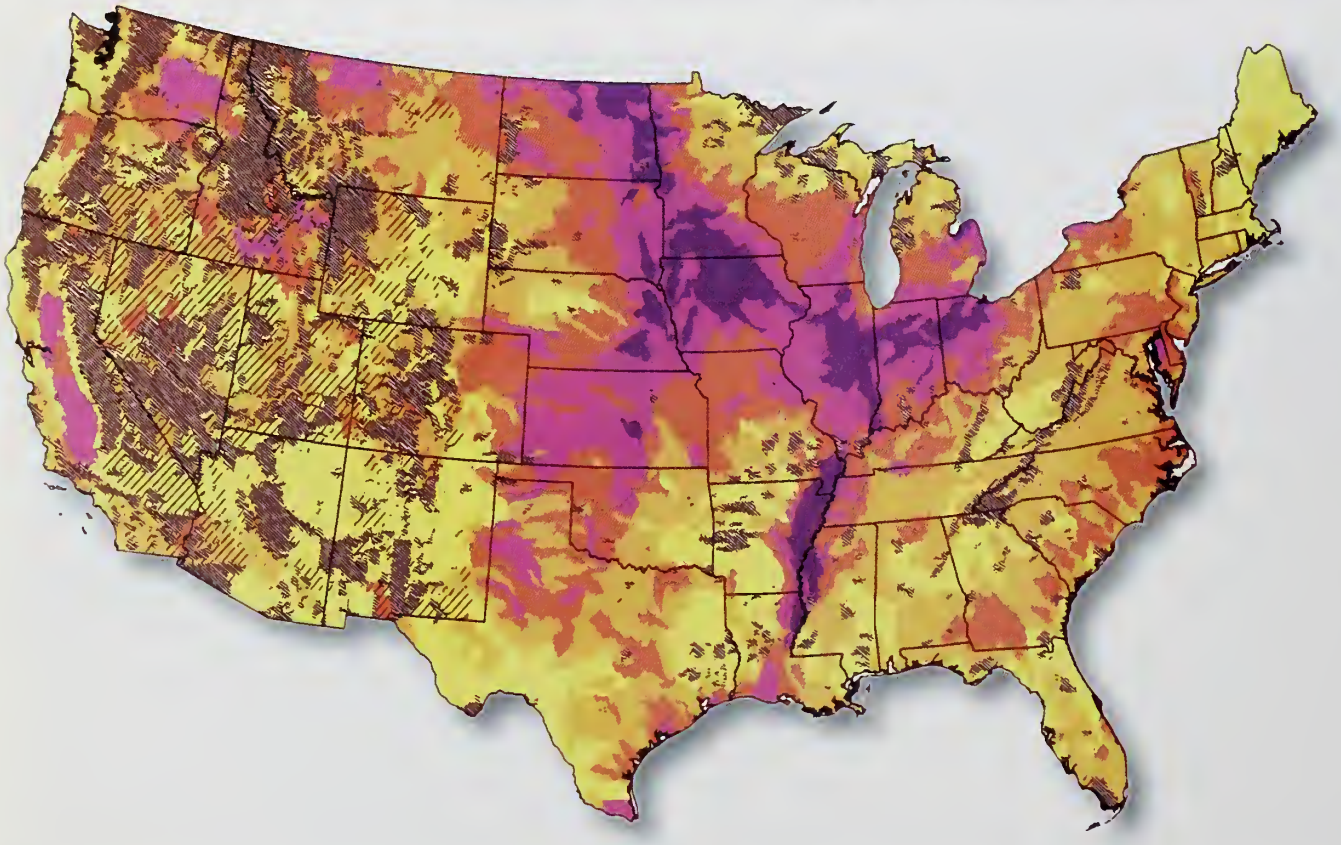
- The average annual rate of soil erosion for the nation dropped substantially between 1982 and 1992, translating to a saving of nearly 1 billion tons of soil per year, largely attributable to the success of the nation's farmers in meeting the conservation provisions of the 1985 farm bill.

- In 1992, we had 334 million acres of prime farmland–our best agricultural land. That was a drop of 6 million acres (primarily due to rural and urban development) from 1982.

- Wetland loss due to agriculture has slowed significantly. Since the mid-1980s, wetland conversions attributed to agriculture have dropped dramatically to about 31,000 acres a year.

The NRI contributes to resource appraisals authorized by the Soil and Water Resources Conservation Act of 1977. These "RCA" appraisals are the basis for USDA's National Conservation Program as well as farm and environmental legislation.

NRI maps report the extent of cropland (depicted) and other indicators of natural resource conditions and trends.



Conservation Leadership for the 21st Century

On the threshold of the 21st century, this nation is facing enormous conservation challenges. Some of these include:

- Sustaining the health of a shrinking agricultural land base, which is expected to help feed a world that could, by some estimates, double in population in 60 years.
- Ensuring that we not only have clean water, but enough of it.
- Continuing the momentum to conserve and protect our soil, water, air, plants, and animals.
- Reducing the tensions that divide our society on natural resource issues.
- Building public policies and programs that are fair, affordable, and targeted to our most critical problems.
- Encouraging a conservation ethic in the world's citizens.

But our opportunities are just as great:

- Forming new partnerships across the land–partnerships that stretch our thinking and our conservation resources, partnerships that include a government that works better and costs less.
- Applying exciting technology that can give us a comprehensive view of our land and water and tomorrow's consequences of today's actions.
- Drawing on skilled and caring people–in government, on our farms and ranches, in our cities and suburbs–to meet the challenges of the 21st century.

The Natural Resources Conservation Service belongs to all Americans. We are committed to working with you, wherever you are, to make sure that we and our children will live in a healthy land in the next century and beyond.

Tim McCabe

Skilled and caring people are a vital link in meeting natural resource challenges.

NRCS is bringing people, partnerships, and technology to bear on the complex resource issues facing rural and urban America.

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Aldo Leopold described the conservation picture well in 1939 when he wrote that "it is the American farmer who must weave the greater part of the rug on which America stands."

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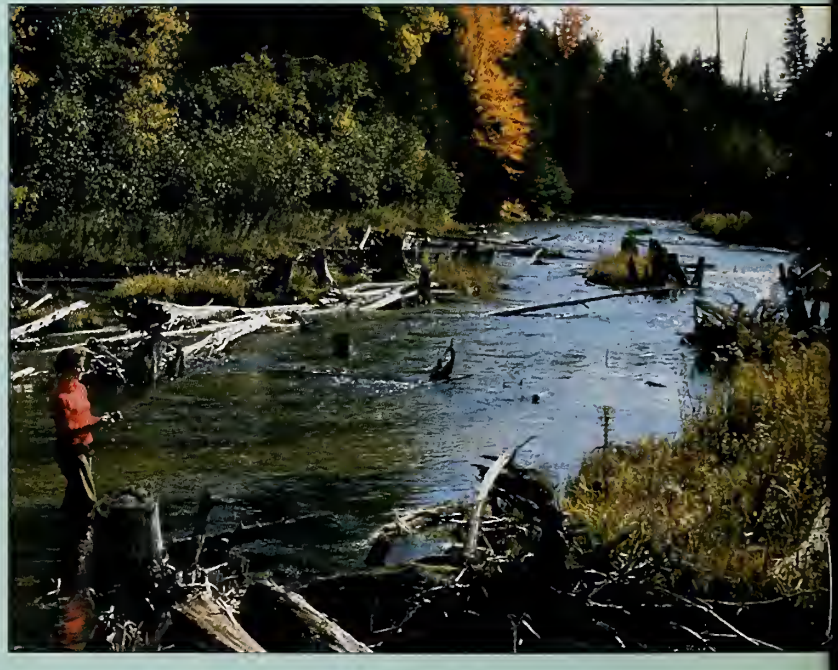

United States Department of Agriculture

Natural Resources Conservation Service